

# ISO 12164-5:2023-10 (E)

## Hollow taper interface with flange contact surface - Part 5: Shanks of types AS, CS and ES

---

Contents	Page
<b>Foreword .....</b>	<b>iv</b>
1 <b>Scope .....</b>	1
2 <b>Normative references .....</b>	1
3 <b>Terms and definitions .....</b>	1
4 <b>Hollow taper shanks, types and dimensions .....</b>	1
4.1 <b>General .....</b>	1
4.2 <b>Hollow taper shanks of type AS .....</b>	2
4.2.1 <b>General .....</b>	2
4.2.2 <b>Balancing measures at the HSK-AS taper shank flange .....</b>	8
4.3 <b>Hollow taper shank of type CS .....</b>	23
4.3.1 <b>General .....</b>	23
4.3.2 <b>Basic dimensions .....</b>	23
4.4 <b>Hollow taper shank of type ES .....</b>	26
4.5 <b>Dimensions .....</b>	27
5 <b>Balancing .....</b>	32
5.1 <b>General .....</b>	32
5.2 <b>Fine balancing of HSK-AS and HSK-CS .....</b>	32
6 <b>Design .....</b>	33
6.1 <b>HSK sizes and types .....</b>	33
6.2 <b>Medium-transfer unit .....</b>	33
6.3 <b>Clamping forces .....</b>	33
6.4 <b>Material and heat treatment .....</b>	33
7 <b>Designation .....</b>	33
<b>Annex A (informative) Clamping forces for shanks of types AS, CS and ES .....</b>	<b>34</b>
<b>Annex B (informative) Hollow taper shanks of type CS with medium-transfer unit .....</b>	<b>35</b>
<b>Annex C (informative) Balancing measures and tool handling equipment .....</b>	<b>36</b>
<b>Annex D (informative) Overview of all different types of shanks .....</b>	<b>37</b>
<b>Bibliography .....</b>	<b>38</b>